

(19) 世界知的所有権機関
国際事務局



(43) 国際公開日
2005 年 8 月 11 日 (11.08.2005)

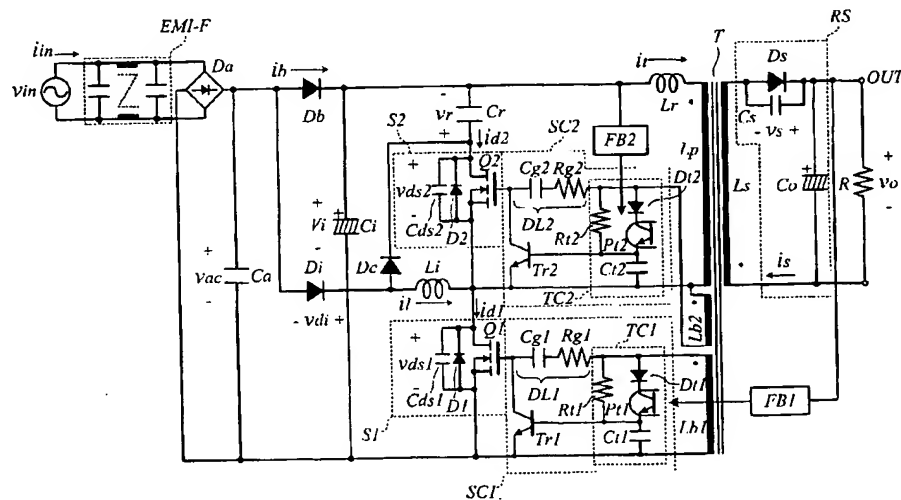
PCT

(10) 国際公開番号
WO 2005/074113 A1

- (51) 国際特許分類: H02M 3/28
- (21) 国際出願番号: PCT/JP2004/016103
- (22) 国際出願日: 2004 年 10 月 29 日 (29.10.2004)
- (25) 国際出願の言語: 日本語
- (26) 国際公開の言語: 日本語
- (30) 優先権データ: 特願2004-024563 2004 年 1 月 30 日 (30.01.2004) JP
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- (81) 指定国 (表示のない限り、全ての種類の国内保護が可能): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, [続葉有]

(54) Title: SWITCHING POWER SUPPLY

(54) 発明の名称: スイッチング電源装置



(57) Abstract: A switching power supply comprising first and second switch circuits (S1, S2) composed of switch elements (Q1, Q2), diodes (D1, D2) and capacitors (Cds1, Cds2), and a transformer (T). A first inductor (Lr) is connected in series with the primary winding (Lp) of the transformer (T). A second inductor (Li) is provided such that the voltage of a third capacitor (Ca) is applied during the on period of the first switch circuit (S1). A diode (Di) for blocking the reverse current of the second inductor (Li), and a capacitor (Ci) charged by the exciting energy stored in the second inductor (Li) to apply a voltage to the primary winding (Lp) during the on period of the first switch circuit (S1) are also provided. Furthermore, a capacitor (Cr) is provided to form a closed loop together with the inductor (Lr), the primary winding (Lp) and the second switching circuit (S2).

(57) 要約: スイッチ素子 (Q1), (Q2)、ダイオード (D1), (D2)、キャパシタ (Cds1), (Cds2) からなる第1・第2のスイッチ回路 (S1), (S2) と、トランス (T) を備え、トランス (T) の1次巻線 (Lp) に直列に第1のインダクタ (Lr) を接続し、第1のスイッチ回路 (S1) のオン期間に第3の

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ABSTRACT

A switching power supply apparatus includes first and second switch circuits (S1) and (S2) composed of switch devices (Q1) and (Q2), diodes (D1) and (D2), and capacitors (Cds1) and (Cds2), and a transformer (T). A first inductor (Lr) is connected in series with a primary winding (Lp) of the transformer (T), and a second inductor (Li) is provided so that a voltage of a third capacitor (Ca) is applied during an on-period of the first switch circuit (S1). A diode (Di) preventing a reverse current from flowing in the second inductor (Li), and a capacitor (Ci) that is charged by excitation energy stored in the second inductor (Li) and that applies a voltage to the primary winding (Lp) during the on-period of the first switch circuit (S1) are further provided. A capacitor (Cr) is further provided so as to form a closed loop together with the inductor (Lr), the primary winding (Lp), and the second switch circuit (S2).